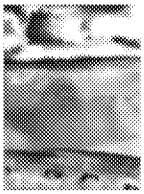

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August 4, 2017

SENT ELECTRONICALLY

Chad Konickson, Chief of the St. Paul District Regulatory Branch
Kenton Spading, PolyMet Project Manager
US Army Corps of Engineers
Sibley Square at Mears Park
190 5th Street East, Suite 401
St. Paul, MN 55101-1638

RE: PolyMet Mining Inc. NorthMet Project Wetlands Impacts
USACE Clean Water Act Section 404 Permit MVP-1999-5528-JKA

Dear Mr. Konickson, Mr. Spading:

Attached with this letter and submitted on behalf of WaterLegacy, please find the following documents:

Jonathan Price, PhD, *Evaluation of the Impact of the Proposed NorthMet Mine on Local Wetlands* (July 2017);

Jonathan Price, PhD, *Curriculum Vitae* (July 2017);

Leclair, Whittington, Price, *Hydrological functions of a mine-impacted and natural peatland-dominated watershed, James Bay Lowland*, 4. J. Hydrol. 732-747 (2015); and

Whittington, Price, *Effect of mine dewatering on the peatlands of the James Bay Lowland: the role of marine sediments on mitigating peatland drainage*, 27 Hydrol. Process.1845-1853 (2013).

These documents are submitted in response to questions asked by Ralph Augustin when Brian Branfireun and I met with U.S. Army Corps of Engineers (USACE) staff in the spring of 2016 to discuss concerns about the Clean Water Act Section 404 permit sought by PolyMet Mining ("PolyMet") for its NorthMet copper-nickel mine. At that meeting, Dr. Branfireun briefly discussed Dr. Price's research related to impacts of mine dewatering on wetlands and peatlands.

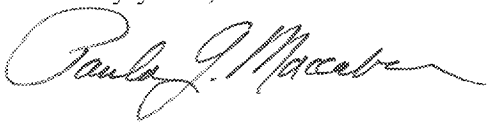
Dr. Price's expert *Evaluation of the Impact of the Proposed NorthMet Mine on Local Wetlands* is also submitted to support WaterLegacy's June 29, 2017 request for supplemental environmental review of the PolyMet NorthMet project and WaterLegacy's December 14, 2015 Comments opposing PolyMet's application for a Clean Water Act Section 404 permit. We would highlight for your immediate attention Dr. Price's conclusion that the "analog" method used by the USACE (as well as by -the Minnesota Department of Natural Resources) to estimate secondary impacts of the proposed PolyMet NorthMet mine on wetlands is wholly inadequate, so the environmental review and permitting record lacks a reliable evaluation of the indirect impacts of the NorthMet mine on wetlands and peatlands in the Partridge River headwaters.

The following quotes are excerpted from Dr. Price's evaluation, attached in full with this letter:

> [T]he assertions regarding mine site wetlands impacts made by PolyMet and its consultants and adopted by the agencies in the Final Environmental Impact Statement ("FEIS") based on an analog model are poorly supported. The analog model used is superficial, due to the failure to rigorously assess the hydrology of the PolyMet mine site and the differences between this hydrology and that of the proposed analog. This failure of analysis creates an unacceptable degree of uncertainty. (p. 1)
>
> The analog method used by PolyMet and in the FEIS to estimate NorthMet mine site wetlands impacts was wholly inadequate. (p. 5)
>
> Lessons learned from the Victor mine suggest that NorthMet mine site wetlands drawdown is likely to be more extensive than predicted by the PolyMet analog hypothesis. . . (p. 13)
>
> The area and extent of NorthMet drawdown impact on wetlands has not been reliably estimated because the NorthMet hydrogeology investigations rely on few direct measurements, and an analog that is not representative of NorthMet mine conditions. (p. 14)
>
> [R]eliance on an analog approach, based on previous mining activities in which the hydrogeological characteristics of the bedrock aquifer are not analogous, is poor science, and wholly inappropriate for making sound management and regulatory decisions. The USACE estimate of indirect wetlands impacts and proposed assurance for those impacts based on the analog model, along with further unsupported assumptions previously discussed, would provide insufficient recognition of and compensation for wetlands drawdown impacts. (p. 17-18)

Please do not hesitate to contact me if you have questions regarding Dr. Price's evaluation or his recommended next steps.

Sincerely yours,



Paula Goodman Maccabee
Advocacy Director/Counsel for WaterLegacy

Attachments

cc: U.S.D.A. Forest Service
Minnesota Department of Natural Resources
U.S. EPA Region 5
Fond du Lac Band of Lake Superior Chippewa
Grand Portage Band of Lake Superior Chippewa
Bois Forte Band of Lake Superior Chippewa